

Thalassinæ. I have not yet examined the *Paguridæ* in this direction. Nowhere else am I acquainted with a similar structure of the sternum, except in a *Penæus* from Manilla, the female of which presents a peculiar soft structure on the fifth segment of the thorax. This is a round, chitinous, but uncalcified disk, which bears an elevated ridge in the middle, running from before backwards, the whole length of which is deeply slit, but in such a way that its lips close tightly. The function of this organ is quite enigmatical, and nothing analogous to it is known in other *Penæi*.

XLIII.—*Contributions to an Insect Fauna of the Amazon Valley.*

COLEOPTERA : LONGICORNES. By H. W. BATES, Esq.

[Continued from p. 124.]

Genus STEIRASTOMA, Serv.

Serville, Ann. Soc. Ent. Fr. iv. 24.

This is a well-defined genus, not very closely allied to any of the preceding. Its nearest relationship seems to be with those species of *Acanthoderes* which have slender fore tibiæ, rounded anterior acetabula, and closed acetabular sutures, tricarinate thorax, and prominent centro-basal ridges continuing as smooth carinæ to the apex of the elytra. It differs, however, from *Acanthoderes* in the complex tuberculation of the sides of the thorax. Instead of a simple lateral conical tubercle or spine, as is usual in the Longicorn family, the thorax presents, on each side, an irregular prominence furnished with three tubercles. In some species this prominence is very strongly developed, and then two of the tubercles are carried to the apex, giving it a bifid appearance, the third remaining at the base beneath. All the species have, besides this tricuspid prominence, an acute tubercle on each side near the fore margin of the thorax; and some present, in addition to this, a similar pointed wart on the side, some distance above it. The muzzle, although similar in shape to that of *A. bivitta*, is considerably longer and more broadened anteriorly than in any species of *Acanthoderes*, and the fore angles are more strongly pronounced. The mandibles are long, very slightly bowed, and much flattened. The centro-basal ridges of the elytra are curved outwards and prolonged behind as more or less flexuous smooth keels to the apex. In the males of some species the basal joint of the antennæ forms an irregular many-angled club, and is longer in proportion to the third than is the rule in the section to which the genus belongs.

1. *Steirastoma depressum*, Fabr.*Cerambyx depressus*, Fabr. Ent. Syst. i. ii. 260. 32.

St. breve, depressum, postice valde attenuatum, nigrum, tenuiter griseo tomentosum: thoracis lateribus quinquetuberculatis, dorso depresso tricarinato: elytris subtrigonis, carinis centro-basalibus valde curvatis ramulum suturam versus emittentibus, apice spinosis: pedibus nigris, cinereo obscure variegatis: corpore subtus nigro, nitido, lateribus ochraceo tomentosis. Long. 7-11 lin. ♂ ♀.

Head black, scantily clothed with grey tomentum, sparingly punctured with three raised longitudinal lines, the lateral ones flexuous, the central one straight and running from the vertex to the edge of the epistome. Antennæ half as long again as the body in the ♂, a little longer than the body in the ♀, black, the bases of the joints ashy; the first joint in the ♂ of an irregular clavate shape, rugose, tuberculated at the apex. Thorax punctured near the fore and hind margins; the sides have each five tubercles, two anteriorly and three on the moderately produced lateral prominence; the dorsal carinæ are smooth, and shining black, the lateral ones being flexuous, interrupted, and tuberculate. The elytra are clothed with thin ashy tomentum, streaked and spotted with black; the centro-basal ridges are granulated and strongly curved, the posterior end of the curve emitting a short branch towards the suture; afterwards each is continued as a flexuous and smooth keel to the apex: the apex itself is produced into a strong tooth or spine, which varies in length in different individuals. The fore legs of the ♂ are much elongated.

This is a common Guiana species, and is generally distributed throughout the Amazon region, being found everywhere in new clearings, sometimes under the loose bark of trees. Like all the other species of the genus, it is sluggish in its motions, and feigns death when touched, bending its legs in a rigid position, and falling to the ground. As the Fabrician description is insufficient, and his name has been referred to a nearly allied but distinct South Brazilian species, I have thought it necessary to give a lengthened diagnosis. According to the British Museum collection, the *C. depressus* of Fabricius is the same as the *C. brevis* of Sulzer, an earlier author, and applies to the larger species of South Brazil above mentioned. I think, however, the description of Fabricius quoted above cannot apply to any other than the one I have described. It is probable, also, that Sulzer and the other old authors had the Guiana species in view in their *C. brevis*; for the productions of Brazil were not known in Europe at the time they wrote. I do not adopt Sulzer's name, however, because it is likely that the *C. depressus*

of Linnæus, since Mr. White applies it to the Guiana insect, is the same species as the Fabrician; and therefore the name *depressus*, again having the priority, would stand. I have no means of deciding this point. Linnæus gives Coromandel as the locality of his *C. depressus*; and Fabricius does not quote his name in the synonymy. I have received a pair of *Steirastoma depressum* from M. Deyrolle of Paris, as coming from Venezuela, under the name of "*St. difformis*" of Dejean. It is considerably modified from the Guiano-Amazonian type, being more closely tomentose, and ochreous rather than grey in colour.

2. *Steirastoma melanogenys*, White.

Steirastoma melanogenys, White, Cat. Long. Col. in Brit. Mus. ii. p. 355.

The male in this species has a strong tooth or spine on the inner edge of the fore tibiæ near the middle. This was overlooked by Mr. White; otherwise his description, as cited above, leaves nothing to desire. This insect is the "*St. aculeata*" of Dejean's catalogue, according to specimens I have received from Paris. Cayenne examples do not differ at all from those found in the Amazon region. I met with the species only in the central parts of the Lower Amazons, at Obydos and Santarem.

3. *Steirastoma cænosum*, n. sp.

St. modice elongatum, postice attenuatum, depressum, tomento cervino-fusco vestitum: capitis thoracisque lateribus et plagis magnis duabus elytrorum fuscis: elytris apice valde spinosis. Long. 10 lin. ♀.

Head and labrum densely clothed with ashy-brown pile, the former punctured in front and marked with three fine longitudinal raised lines on the epistome, the central one extending to the vertex; the sides black. Antennæ brown; the third joint beneath with three very fine spines placed widely apart. Thorax quadrituberculate on each side, the lateral prominence very large, trituberculate, and the tubercle near the fore angle prominent; the dorsal surface depressed, punctured, tricarinate; the central keel very faint, the lateral ones prominent, flexuous; densely clothed with light-brown pile, the sides with a stripe of a coffee-brown colour between the lateral keel and the tubercles. Elytra depressed, elongate, subtrigonal; the centro-basal ridges prolonged behind to the apex, gently curved outwards and granulated from the base to two-thirds the length, then flexuous and smooth to their termination: the surface faintly and sparingly granulate-punctate, with a few large granulations, besides, on the shoulders; light or tawny-brown in colour, with a silky gloss; the sides have each two large irregular patches of a coffee-

brown colour, one covering the shoulder and extending in a short streak to the disk, the other placed obliquely a little behind the middle; the apex of each elytron is produced into a spine. Body beneath thickly clothed with ashy-brown pile; the middle of the abdomen shining black. Legs thinly covered with ashy-brown pubescence.

One example, taken at Oyayá, banks of the Curuá, below Santarem.

The species is nearly allied to *St. melanogenys*, but differs in the shape and position of the spines beneath the third antennal joint, in its clothing and markings, and in the apex of the elytra not being squarely truncated with a spine at the external angles, but produced on each elytron into a stout spine.

4. *Steirastoma æthiops*, n. sp.

St. modice elongatum, depressum, supra tomento atro-griseo vestitum: capitis thoracisque lateribus et plagis magnis duabus elytrorum nigris: elytris apice valde spinosis. Long. 8-10 lin. ♂ ♀.

Head and labrum clothed with very dark-grey pile, the former with three longitudinal raised lines on the front, the central one extending to the nuchus, the lateral ones short and very prominent; sides black. Antennæ black; bases of the joints greyish, the third with a few very fine spines or bristles beneath, placed wide apart; the basal joint in the ♂ pyriform-clavate, smooth. Thorax quadrituberculate on each side, the lateral prominence very large, trituberculate, the tubercle near the fore angle prominent; the dorsal surface depressed, punctured, tricarinate; the central keel very faint, the lateral ones strongly pronounced; thickly clothed with very dark-grey pile, the sides each with a black stripe between the lateral keel and the tubercles. Elytra depressed, elongate, subtrigonal; the centro-basal ridges prolonged behind to the apex, strongly curved outwards, and granulated to two-thirds the length, then flexuous and smooth to their termination; the surface faintly and sparingly granulate-punctate, with a few large granulations, besides, on the shoulders; very dark grey, the sides having each two large, irregular, black patches—one, which is sometimes broken into smaller spots, covering the shoulder and extending in a slender streak to the disk, the other placed obliquely a little behind the middle; the tips of the elytra are briefly sinuate-truncate, the external angles produced into stout spines. Body beneath and legs clothed with very dark-grey pile; the middle of the abdomen naked, shining black. The fore tibiæ of the ♂ are untoothed.

This species occurred only at Ega and St. Paulo, on the Upper Amazons. It differs very little, except in colour, from *St. canosum*, and may be considered a geographical variety or race of

that species. I have not seen either form in collections from other parts of South America.

Genus *PLATYSTERNUS* (Dej.), Blanch.

Blanchard, Histoire des Insectes, ii. 156.

The few words given by Blanchard as generic characters, in the place above quoted, have little or no meaning; the genus, however, is well known to entomologists from the figure given by Olivier of the only described species. It is a singular form of Lamiaire, partaking of the characters of *Steirastoma* and the Anisocerinæ—two widely different groups. The shape of the thorax, the closed acetabular sutures, and the direction of the centro-basal ridges of the elytra show a near affinity with the *Steirastomata*; whilst the form and smoothness of the muzzle, the broadly rounded apices of the elytra, and the depression of the fore edge of the metasternum are so many points of resemblance to the Anisoccrinæ. The lateral prominences of the thorax are not simple, but bicuspid, the anterior cusp, however, being very much smaller than the posterior one. The antennæ are slender, one-fourth shorter than the body, and the eleventh joint, as in most of the Anisocerinæ, is much shorter than the tenth.

Platysternus hebræus, Fabricius.

Cerambyx hebræus, Fabr. Mant. Ins. i. 131.

—, Oliv. Ent. iv. p. 62, t. 15. f. 106.

I met with this rare and magnificent insect only at Caripí, near Pará. It was there found in some numbers, gnawing the bark of living Guariúba trees—a lofty tree of the order Leguminosæ, whose bark is thick, smooth, and friable, and much frequented by bark-feeding insects, especially Curculionides of the group Cryptorhynchini. Cicindelidæ of the rare genus *Iresia* are sometimes seen on the same tree, coursing over the trunk and preying upon the vegetable feeders; in fact, I never met with *Iresia* except on Guariúba trees. The large *Cratosomi* sometimes abound, and gnaw large holes in the bark. These insects do not seem to breed in the wood of the standing trees, but merely to resort to them for the purpose of gnawing the bark.

I have seen a second and undescribed species of *Platysternus* in the collection of Count Mniszech, at Paris.

Genus *POLYRHAPHIS*, Serv.

Serville, Ann. Soc. Ent. Fr. iv. 26.

From the seemingly capricious way in which the various parts of structure that, in other Coleoptera, furnish signs of affinity

are modified from genus to genus in the Longicorn family, it is difficult to decide on the true position and relationship of the present group. In the general shape of the body, as well as in the form of the muzzle, thorax, and apex of the elytra, it seems to approach the genus *Acrocinus*. The antennæ, however, are quite glabrous beneath, instead of being ciliated partially or wholly as in *Acrocinus*; and the fore tarsi of the ♂ are dilated and ciliated, instead of being simple. In the proportions of the apical joints of the antennæ there is a great similarity between *Polyrhaphis* and the Anisocerinæ, the terminal joint in both sexes being extremely short compared with the penultimate. This seems to be a significant character. The form of the muzzle, too, is not greatly different from that of the Anisocerinæ; but the general form, the shape of the elytra and of the sterna, reveal no affinity with that group. The genus seems to have no close relationship with any other group of Lamiæ: it shows some resemblance to *Acrocinus* and the Anisocerinæ; but many intermediate links are wanting to prove a genealogical relationship. The prosternum is extremely narrow in this genus, and the mesosternum is contracted in the middle between the haunches. The anterior acetabula gape widely on the sides, the sutures being opened along their whole length. The genus is a very natural or well-defined one, comprising a cluster of species which agree with each other in facies as well as in structural characters. They are all of large size, have greatly elongated, filiform, rather stout antennæ, long and acute lateral thoracic spines, sometimes directed forwards, and ample oblong elytra, whose apices are broadly truncated and spined.

1. *Polyrhaphis spinosa*, Drury.

Lamia spinosa, Drury, Illustr. ii. p. 60, pl. 31. f. 3 (1773).

Cerambyx horridus, Oliv. Ent. iv. 66, pl. 4. f. 29 (1789–1808).

Lamia horrida, Fabr. Ent. Syst. i. ii. 273. 25 (1792).

The figures given by Drury and Olivier agree well in shape and form of the spines with the insect I have before me, taken at Villa Nova, on the Lower Amazons. My example, however, appears to be of a lighter colour. The general hue of the tomentum is hoary or ashy, the elytra, with the exception of the basal and apical parts, being of a violet-brown colour. The shape of the elytra in this species is elongate-quadrate, being only slightly narrowed posteriorly, with the base and apex rectangular, and the sides nearly straight. The spines on the elytra are as follows:—a row of small ones placed close to the suture, but deficient near the base and the apex; three large ones on the centro-basal ridges, two on the shoulders, and five or six very long ones on the disk. It occurs in Guiana as well as the

Amazon region, and appears to be a rare insect. I met with only one example, which was found closely adhering to a dead branch, and scarcely distinguishable from it on account of the colours resembling those of the lichens with which the wood was covered.

2. *Polyrhaphis hystricina*.

P. brevis, subconvexa, spinosa, tomentosa, cervino-fusca, postice cinereo variegata : thoracis spinis antrorsum valde curvatis : elytris truncatis, angulis internis acutis, externis valde productis. Long. 12 lin. ♂.

Head scantily punctured, dull black, clothed with tawny-brown pile. Antennæ dark brown. Thorax punctured near the fore and hind margins, clothed with tawny-brown pile clouded with dusky ; dorsal tubercles very large, obtuse ; lateral spines strong, elongated, and more strongly curved forwards than in *P. spinosa*. Elytra rather short, subquadrate, slightly but gradually narrowed from the base, the sides nearly straight to three-fourths the length, and then gradually rounded to the apex, which is broadly truncated ; the sutural angle very slightly produced, and the external one armed with a stout spine : the surface is studded with stout but not long or acute spines ; there are five or six in a row on the strongly-raised centro-basal ridge, three or four along the suture near the middle, several smaller ones on the shoulders, and a short series of three or four between the shoulders and the centro-basal ridge, and, lastly, five on the disk, namely, two in the middle and three on the posterior part ; the interspaces are studded with large, deep, and shining punctures, the apical portion of the elytra behind the spines alone being entirely smooth. Under surface of the body and legs black, thinly clothed with brownish pile ; tarsi and a ring at the tips of the femora bright fulvous.

There is a specimen of this species in the British Museum, ticketed "*P. hystricina*, White," which name I have adopted ; it is larger and paler in colour than my example, but agrees with it in all other respects. It appears to be a rare species. My specimen was taken near Pará.

3. *Polyrhaphis angustata*, Buquet.

Polyrhaphis angustatus, Buquet, Ann. de la Soc. Ent. de France, 1853, p. 445.

This species has been described at length by M. Buquet in the place quoted. It is an elongated parallel-sided species, 14 lines long ; the elytra are free from spines or tubercles, being simply granulate and punctate partly in rows, but smooth towards the apex. The spines of the thorax are long and straight. The general colour is dull-reddish brown, varied with small

specks and clouds of a dark-brown hue. The fore tarsi in the ♂ are feebly dilated and fringed, and the antennæ in the same sex are nearly twice the length of the body.

I met with the species on the banks of the Tapajos and at Ega. The examples found do not differ from the Cayenne specimen which I saw in M. Buquet's collection. The insect is found on the trunks of fallen trees in the virgin forest. Like many other large species of Longicornes, it comes abroad at night, and flies over broad rivers. I once found an individual along with many other dead or half-dead insects on a sand-bank in the middle of the Tapajos, which had been cast ashore after falling into the water during a squall in the night.

4. *Polyrhaphis gracilis*, n. sp.

P. elongata, angustata, subconvexa, tomentosa, violaceo-fusca: thoracis lateribus elytrisque postice flavo variegatis: elytrorum apicibus rotundato-truncatis, angulis externis spinosis. Long. 8 lin. ♀.

Head clothed with reddish pile, sides black; front coarsely punctured; muzzle short. Antennæ the length of the body, dull brown. Thorax punctured, reddish in colour, the sides behind varied with yellowish; the two dorsal tubercles small; the lateral spines long, slender, and slightly bent forwards. Scutellum yellowish. Elytra narrow, much elongated, and somewhat convex, gradually increasing in breadth from one-third to two-thirds their length, then slightly narrowed to the apex, which is obliquely and obtusely truncated, the external angle of the truncation produced into a spine; the basal half of the surface is thickly granulate-punctate, the apical portion entirely smooth; the colour is a dull-reddish or violet brown, the smooth posterior portion being varied with ashy yellow. The body beneath and legs are black, thinly clothed with ashy pile.

I only obtained one example of this small and elegantly shaped species, which was taken at Ega, on a dead branch.

5. *Polyrhaphis papulosa*, Olivier.

Cerambyx papulosus, Oliv. Ent. iv. 72, pl. 20. f. 156.

This fine species is found at Cayenne and, according to Erichson (Consp. Ins. Peruana) in the forest region of Eastern Peru. My only example, a ♀, 15 lines in length, was taken on a slender dead branch in the forest at Ega—a locality midway between the two regions.

6. *Polyrhaphis Jansoni*, Pascoe.

Polyrhaphis Jansoni, Pascoe, Trans. Ent. Soc. Lond. v. n. s. pt. 1.

Mr. Pascoe, in the description referred to above, likens this

species to the common *P. spinipennis* of Laporte, a native of South-east Brazil. It does not seem very closely allied, however, to that species. The elytra are less depressed, more thickly and deeply punctured on the base and disk, and less parallel-sided, being broad at the base and more tapering to the apex. In general outline it more nearly resembles *P. papulosa*. The colour above is fulvescent or tawny brown, the apical third of the elytra variegated with fine longitudinal streaks of a darker-brown hue. The bright-fulvous tarsi and the fulvous apical ring of the femora, contrasted with the deep-black legs, are features it possesses in common with *P. hystricina* and the following form, *P. Paraensis*. The surface of the elytra, except the apical portion, is studded with short obtuse spines, or, rather, conical tubercles; these vary in number in different examples, as they do in most species of *Polyrhaphis*; but, as is usual in the genus, they are constant in position. There is a row along the prominent centro-basal ridge, a series of three or four along the suture near the middle, and two oblique rows along the middle of the disk, the inner one of which extends in a flexuous direction to the base of the elytra. Besides these spines, the elytra on the sides and shoulders are thickly studded with tubercles arranged in rows, each accompanied, as the spines also are, by a large and deep puncture. The disk of the elytra towards the suture is much depressed, and, with the interspaces of the base, is thickly punctured; the apical third of the surface is smooth and impunctate. The apex of the elytra is truncated, the sutural angle has a very small projecting point, the external one being produced into a spine. The length varies from 9 to 15 lines.

This species is rather common at Ega, on the trunks of fallen trees in the forest. It is also found on the banks of the Cuparí, an affluent of the Tapajos.

7. *Polyrhaphis Paraensis*, n. sp.

P. oblonga, tomentosa: capite fuliginoso: thorace fulvescente: elytris fuliginosis, basi et pone medium cervino variegatis: elytrum tuberculis ut in *P. Jansonii* dispositis. Long. 10 lin. ♀.

Head and antennæ sooty black, the former punctured in front. Thorax fulvous, the disk clouded with dusky; the lateral spines straight, the dorsal tubercles acute. Elytra broad at the base, then gradually narrowed to three-fourths their length, whence they are more abruptly narrowed and rounded to the apex, which is truncated; the sutural angles simply pointed, the external ones produced into spines; the tubercles and punctures on the surface are arranged precisely as in *P. Jansonii*, but the colour is different; the base is of a tawny-brown hue, the central parts

and the apical third sooty brown, the interval between these darker patches being of a paler tawny colour. Legs black, a ring at the apex of the femora and the tarsi bright fulvous.

This species, which is no doubt a local modification of *P. Jansoni*, is found at Pará.

[To be continued.]

XLIV.—On *Antiaris Bennettii*, a new Species of Upas-Tree from Polynesia. By BERTHOLD SEEMANN, PH.D., F.L.S.

Antiaris Bennettii; arbor mediocris; ramulis petiolisque pubescentibus, demum glabris; foliis brevipetiolatis ovato-oblongis acuminatis integerrimis, basi inæquali-cordatis, utrinque subglabris, supra lucidis; floribus masculis fasciculatis (2–4), pedunculis velutino pubescentibus, involuero lacinii ovato-acuminatis perigoniorum longitudinem reflexis, fœmineis solitariis; drupa ovato-acuta, dense velutina (v. v. sp.).

Antiaris Bennettii, Seem. in Bonplandia, vol. ix. (1861), p. 259, et ibid. vol. x. p. 3, t. 7 (1862).—Bennett's Gatherings of a Naturalist in Australasia (London, 1860), p. 403.

Nomen vernaculum Tucopiense 'Mami,' teste G. Bennett; Vitiense 'Mavu ni Toga,' teste Seemann.

Geogr. Distribution; Viti Levu, about Namara, and Moturiki (Seemann! n. 449, Harvey!).—Tucopia, lat. 12° S., long. 169° E. (G. Bennett! in Herb. Hook.), and Wallis Island, lat. 16° 30' S., long. 176° W. (Sir E. Home! in Mus. Brit.)

Hitherto only three species of *Antiaris* were known, viz., *A. toxicaria*, Lesch. (the genuine Upas-tree of Java), *A. innoxia*, Bl., and *A. macrophylla*, R. Br. A fourth species (ramis folisque utrinque velutinis) is cultivated in the Royal Botanic Gardens at Kew. A fifth species was found by Thwaites in Ceylon, and has been described by me as *A. Zeylanica* (Bonpl. x. p. 4, in adnot.); it is called by the Cingalese "Ritti-gass," and supplies, like *Q. saccidora*, Dalz. materials for sacks. In his 'Enumeration Pl. Zeyl.' p. 263, Thwaites classes it with *A. innoxia*, Bl., and *A. saccidora*, Dalz.; but I am by no means certain that even *A. innoxia* and *A. saccidora* are identical, and feel convinced that *A. Zeylanica*, Seem., is a very distinct species, at once distinguished from *A. saccidora*, Dalz., of which Wight gives a figure, by its scabrous leaves and pear-shaped fruits*. A

* *Antiaris Zeylanica*; arbor excelsa; ramulis, petiolis, pedunculis drupisque velutinis; foliis obovato-oblongis, acuminatis, integerrimis, supra scabris, subtus hirtellis; involucri masculi lacinii perigoniorum longitudinem reflexis; drupa obovato-obtusa (v. s. sp.).—*A. Zeylanica*, Seem. in Bonpl. vol. x. p. 4, in adnot. *A. innoxia*, Thwait. Enum. Pl. Zeyl. p. 263, non Bl., excl. syn. omu.—In Zeylania, ubi, teste cl. Thwaites,